

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/09/2010 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 46-53 and 54-56, 59, 62, 63, and 64 are rejected under 35**

U.S.C. 102(b) as being anticipated by Tsai et al. (US Patent 5,592,159 A) in view of

Corbett (US Patent 4,700,912 A. Regarding independent claims 46 and 54, Tsai et al. discloses an apparatus and method (See "in operation" description, Column 3, Lines 12-45) for assisting the landing and/or takeoff of a powered flying object, comprising: at least one, related to a landing and/or a takeoff area, stationary fluid current generator (10), which is designed to provide a fluid current in order to introduce energy into a flying object (See Column 3, Lines 33-45), wherein the fluid current provided has a certain specific density (density of water), but does not disclose enriching the fluid

Art Unit: 3644

current with at least one substance of higher specific density. Corbett discloses enriching the fluid current with sea spray which has a higher specific density than air and would thus inherently increase the fluid current's deceleration effect. At the time of invention, it would have been obvious to enrich the fluid current of Tsai et al. with a denser substance in view of the teaching of Corbett. The motivation for doing so would have been to make it easier to see fluid current.

3. With regard to claims 47-53, Tsai et al. discloses assisting the landing and/or takeoff of a powered flying object, wherein: the direction of the fluid current is adjusted depending on the situation (See Column 2, Lines 45-50); the value of at least one further physical parameter of the fluid current is adjusted depending on the situation comprising at least one of the following parameters: temperature of the fluid current, velocity (See Column 2, Lines 45-50) of the fluid current, homogeneity of the fluid current and laminarity rate of the fluid current; a fire-extinguishing agent (water) is introduced into the fluid current provided; the fluid current provided is a wind generated artificially from the existing atmosphere (atmospheric air is compressed to propel the fluid current); assist the landing of a flying object firstly a fluid current is provided, which is capable of decelerating the flying object, and then a fluid current is provided, which is capable of lowering the flying object from a hovering position onto the landing area (See Column 3, lines 33-39); to assist the takeoff of a flying object firstly a fluid current is provided, which is capable of lifting the flying object from the takeoff area to a hovering position and then a fluid current is provided, which is capable of accelerating the flying object in a desired direction (See Column 3, Lines 40-45).

Art Unit: 3644

4. With regard to claims 55, 56, 59, 62, 63, and 64 Tsai et al. discloses the apparatus as described above, wherein; the fluid current provided by the fluid current generator can be adjusted (302); the fluid current generator is designed so as to vary the value of at least one further physical parameter of the fluid current provided (See Column 2, lines 45-50); a fire extinguishing agent (water); generated from the existing atmosphere (atmospheric air is compressed to propel the fluid current); and adjusting the direction of the flow (See Column 2, lines 45-50).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 57, 58, 60, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. as applied to claims 54 and 59 above, and further in view of Bertin et al. (US Patent 3,196,822 A).** Tsai et al. discloses an apparatus for assisting the takeoff and/or landing of a flying object as discussed above, but does not disclose a heating element for heating up the fluid current provided or a turbofan. Bertin discloses a heat exchanger (20) for use in heating up a fluid current in conjunction with a turbojet (34). At the time of invention, it would have been obvious to a person of ordinary skill in this art to provide a heating element in the landing/takeoff apparatus as disclosed in Tsai et al. in view of the teaching of Bertin. The motivation for doing so would have been to provide a fluid current that is more suitable for lifting a flying object,

Art Unit: 3644

similar to a thermal column. Additionally, providing a cooling element for use when the aircraft is landing would also be obvious in view of the heating element of Bertin.

Response to Arguments

7. Applicant's arguments with respect to claims 46-64 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. O'Hara whose telephone number is (571)270-5224. The examiner can normally be reached on Monday thru Friday 10am - 5pm except the first Friday of every Bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael R. Mansen can be reached on (571)272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3644

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R Mansen/
Supervisory Patent Examiner, Art Unit 3644

/B. M. O./
Examiner, Art Unit 3644